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# B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

## February / March 2023 Semester End Main Examinations

**Programme: B.E.**

**Semester: VII**

**Branch: Mechanical Engineering**

**Duration: 3 hrs.**

**Course Code: 20ME7DCPRM**

**Max Marks: 100**

**Course: Project Management**

**Date: 05.03.2023**

**Instructions:** 1. Answer any FIVE full questions, choosing one full question from each unit.  
 2. Missing data, if any, may suitably be assumed.  
 3. Probability table may be permitted.

### UNIT - I

1 a) Define project and discuss the characteristics of project. **10**  
 b) Classify projects and discuss the project life cycle. **10**

### UNIT - II

2 a) Discuss the various WBS formats. **05**  
 b) Discuss scope planning in detail. **15**

### OR

3 a) Write a short notes on (i) project executive role (ii) management role **10**  
 b) What is the relevance of organizational structure? Discuss any two types. **10**

### UNIT - III

4 a) Differentiate PERT and CPM. **10**  
 b) A small project consisting of eight activities has the following characteristics: **10**

#### Time – Estimates (in weeks)

Activity	Preceding activity	Most optimistic time (a)	Most likely time (m)	Most Pessimistic time (b)
A	None	2	4	12
B	None	10	12	26
C	A	8	9	10
D	A	10	15	20
E	A	7	7.5	11
F	B,C	9	9	9
G	D	3	3.5	7
H	E,F,G	5	5	5

(i) Draw the PERT network for the project.  
 (ii) Prepare the activity schedule for the project.  
 (iii) Determine the critical path.  
 (iv) If a 30- week deadline is imposed, what is the probability that the project will be finished within the time limit?

If the project manager wants to 99% sure that the project is completed on the schedule date, how many weeks before that date should he start the project work?

**Important Note:** Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

**OR**

5 a) Discuss different methods for developing project schedules. **10**  
b) Discuss the relevance of CPM? The following details are given w.r.t. **10**  
regarding a project:

Activity	Predecessor Activity	Duration (Weeks)
A	-	3
B	A	5
C	A	7
D	B	10
E	C	5
F	D,E	4

Determine the critical path, the critical activities and the project completion time.

**UNIT - IV**

6 a) Discuss different types of cost in budgeting. **10**  
b) Discuss the methods of estimating costs. **10**

**UNIT - V**

7 a) What is SCM? Explain its types. **10**  
b) List out the components of SCM? Mention its advantages. **10**

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